

ABSTRAC

This study aimed to identify the types of marine debris and analyze their density and distribution at Pulo Sarok Beach, Singkil District, Aceh Singkil Regency. The research applied purposive sampling with a line transect technique at three observation stations. Sampling was conducted over 13 days with two-day intervals. The findings revealed that the debris consisted of organic waste (wood fragments, bamboo, dead coral remains, nipa fruit, coconut shells, water hyacinth) and inorganic waste (plastic and glass). Plastic waste dominated the composition, accounting for 2,307 items (61.27%) with a density of 2,59 items/m² and 194.00 g/m², making it the most abundant category in both number and weight. However, organic waste contributed a higher total weight (225,930 g or 69.09%) compared to inorganic waste. The daily distribution showed that inorganic debris accumulation increased notably during weekends, in line with tourism and trade activities. These findings highlight that human activities, particularly the use of single-use plastics, are the primary contributors to coastal waste in the area. Therefore, integrated community-based waste management and stronger regulatory measures are urgently needed to mitigate marine pollution at Pulo Sarok Beach.

Keywords: Coastal waste, marine debris, Pulo Sarok Beach, waste density